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B P I S A E

RESEARCH ACTIVITIES

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PLANT INDUSTRY STATION, BELTSVILLE, MD.

December 1951

New Assistant Chief

Bureau Chief A.H. Moseman has announced the appointment of K.S. Quisenberry as assistant chief in charge of program planning and coordination. A member of the Bureau staff since 1925, Dr. Quisenberry has been head of the Division of Cereal Crops and Diseases since 1946. During his tenure in that post new research has been initiated in the production of small grains in the South, flax in California, and barley and malt in Wisconsin. Search for resistance to race 15B rust in wheat has been expanded and intensified.



Speaking at the Farmers Union Grain Terminal Association recently, Dr. Quisenberry said, "There is a complex of biotypes of 15B with some more virulent than others. This complex must be unscrambled and studied. In order to find the desired resistance, we have recently arranged with Interior for land on which to grow wheat at Christiansted, St. Croix, Virgin Islands. About 5,000 of the world collection, including those apparently most resistant to 15B were seeded on October 15. Since no wheat is grown commercially on the island, we plan to inoculate these wheats with all the collections of 15B we have. Results from these tests will be ready in January 1952."

Antibiotics Tested for Plant Disease Control

New information on the role of antibiotics in plant disease control is reported by J.W. Mitchell, W.J. Zaumeyer, and Powell Anderson. In their experiments streptomycin sulfate was the most effective of 12 antibiotics tested for the control of halo blight of Black Valentine bean seedlings. In these tests they applied a minute amount of the antibiotic as a thin layer of paste to the stems of the plants, which were then inoculated with halo blight organisms. Apparently the antibiotics were absorbed by the stems and moved up into the primary leaves in sufficient amounts to prevent growth of the disease organisms. None of the plants treated with streptomycin sulfate developed symptoms of the disease, while marked symptoms showed up within a week on inoculated leaves of untreated plants. When the streptomycin sulfate was applied as a water solution -- at rates of 1, 3, and 9 pounds of the antibiotic per acre -- to soil in which seedlings were grown, it did not reduce the incidence of infection nor the severity of the symptoms. Field tests of the treatments are planned for the coming spring.

Bureau Travelers Abroad

W.M. Myers, R.D. Rands, F.M. Tysdal, William McKinnon, and F.G. Bell are attending a rubber plant improvement conference at Turrialba, Costa Rica. Mr. Bell recently transferred from SCS to the rubber development program in Latin America. He will accompany Dr. Rands and Dr. Tysdal on a tour of cooperative work in Guatemala and Mexico following the conference. H.A. Rodenhiser and C.S. Holton (CC&D) are on a swing through South America visiting wheat nurseries to record results on rusts and other diseases. K.D. Jacob (Soils) will attend the forthcoming FAO meeting on plant nutrient problems in Rio de Janeiro. F.W. Parker (Soils) and F.L. Timmons (WI) will leave early in December on FAO missions in India -- Dr. Parker as a consultant on fertilizer production and use and Mr. Timmons as consultant on the control of Kans grass. They will be away for 6 to 8 weeks.

Copies of Lecture Available

"A review of the principles of some applications of experimental design," given by Professor Oscar Kempthorne of Iowa State College, Ames, Iowa, at Plant Industry Station auditorium, December 12, may be obtained from D.D. Mason, biometrical services.

Reading File

Volume I, Number I of WEEDS, Journal of the Association of Regional Weed Control Conferences, came off the press in October. In an article, "Where Do We Go From Here," C.J. Willard of Ohio State University, points out that weed investigations have mushroomed from 3 full time weed men in 1934 and not too many part-time ones to active weed projects at 46 State Experiment Stations and the establishment of a Division of Weed Investigations in USDA. The first issue of the journal carries the bibliography of weed investigations for January through June 1951, prepared by the Division of Weed Investigations. R.L. Lovvorn (WI) is a member of the editorial board and in charge of circulation for the new magazine.

H.A. Borthwick, S.B. Hendricks, and M.W. Parker have written a chapter on photoperiodism for publication in RADIATION BIOLOGY to be published by McGraw-Hill under the auspices of the Division of Biology and Agriculture of the National Research Council. Some quotes of interest:

"We feel that the outline is taking shape and that photoperiodism instead of being a minor phenomenon is one expression of a primary process controlling development."

"In bold summary, a similitude exists in control by darkness of reproduction in plants and animals."

"...the great variation in presence and degree of physiological modification in response to darkness is evidence of the universality of the response."

Letter from India

"You will be glad to know," Director Boshi Sen, of the Vivekananda Laboratory, Almora, India, wrote Merle T. Jenkins, "the cultivator who got first prize for the highest yield of maize in this province used U.S. 13 seeds. With the help of seeds you have sent me I am planning to train local students in the production of 120 bushels of U.S. 13 seeds this year at the government farm near my laboratory. I would like to repeat that this work has been possible through your generous and unfailing help."

Retirements

B.Y. Morrison (PEI) whose connection with the Bureau dates from 1920, who was head of the Division of Plant Exploration and Introduction from 1934 to 1948, and who was the master planner of the National Arboretum, retired November 30. Mr. Morrison expects to spend much of his time breeding superior hardy azaleas for the South in his nursery at Pass Christian, Mississippi. He will continue as consultant on affairs of the National Arboretum.

N.R. Smith (Soils) retired November 30 after 40 years of service in which he made notable contributions to the knowledge of soil bacteria. In retirement Dr. Smith expects to continue on the editorial board of the Journal of Bacteriology and as one of three editors of the 7th edition of Bergey's Manual of Determinative Bacteriology. He and Mrs. Smith will make their home on St. Armand's Key, Sarasota, Florida.

T.K. Stanton (CC&D) retired November 30 after 40 years of service. Dr. Stanton, a Marylander, began work for the Bureau in 1911 shortly after he received his bachelor's degree from the University of Maryland. He was placed in charge of oat investigations in 1922. In 1945 Iowa State College awarded Mr. Stanton an honorary doctorate in agriculture for his contributions to the American oat crop. Dr. Stanton will continue to work with the Bureau as a collaborator. His home is at 4302 Sheridan St., Hyattsville, Md.

Deaths

A.W. Turner, director of research in agricultural engineering, died November 17 after an illness of several months. A native of Minnesota and a graduate of Iowa State, Mr. Turner joined the Bureau in 1944 following an outstanding career with International Harvester. He organized many of the national and regional engineering projects now in progress with the State Experiment Stations.

Word has been received of the death, November 27, of J.I. Lauritzen, who retired from the Division of Sugar Plant Investigations in 1950. Dr. Lauritzen had moved to Riverside, Calif.

